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EXAMINER	
LAM, VINH TANG	

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/560,701	BINSTEAD, RONALD P.	
	Examiner	Art Unit	
	VINH LAM	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 October 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-45* is/are pending in the application.

4a) Of the above claim(s) *2,3 and 15* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-14 and 16-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 January 2009* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *09/29/2010*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims **1**, **4-14**, **20**, **28-41**, and **45** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Yoshikawa et al. (US PGPub. 2003/0231170)** in view of **Tanaka et al. (US PGPub. 2004/0017364).**

Regarding Claim **1**, (Currently Amended) **Yoshikawa et al.** teach a touchpad *([**0051**], FIG. **1**, i.e. digitizing tablet **1**)* comprising a plurality of spaced apart conductors *([**0051**], FIG. **1**, i.e. row electrodes **7**)* located across a ~~the~~ plane of a supporting medium *([**0051**], FIG. **1**, i.e. support substrate **4**)* and an electrically conductive medium *([**0051**], FIG. **1**, i.e. column electrodes **6**)* located in a plane *([**0051**], FIG. **1**, i.e. insulating sheet **8**)* that is substantially paralleled to the plane of the supporting medium *([**0051**], FIG. **1**, i.e. **4 // 8**)*, wherein said supporting medium *([**0051**], FIG. **1**, i.e. support substrate **4**)* supports said plurality of spaced apart conductors *([**0051**], FIG. **1**, i.e. row electrodes **7**)* wherein there is no electrical contact between said plurality of spaced apart conductors *([**0051**], FIG. **1**, i.e. since each of row electrodes **7***

being parallel to others), each of said spaced apart conductors being sensitive to a ~~the~~ proximity *([**0056**], FIG. **1**, i.e. electrodes **7** to couple)* of a finger *([**0056**], FIG. **1**, i.e. stylus pen **9**; or [**0024**], i.e. **finger**)* to modify a ~~the~~ capacitance of said spaced apart conductor *([**0056**], FIG. **1**, i.e. **capacitive dielectric**)* to detect the presence of the finger positioned close to said spaced apart conductor *([**0056**], FIG. **1**, i.e. stylus pen **9** … near …electrodes **7** to couple)*, said electrically conductive medium being proximal to said plurality of spaced apart conductors *([**0051**], FIG. **1**, i.e. electrodes **6** and **7** formed on opposing surfaces of **3** and **4**)* to concentrate an ~~the~~ electric field between said plurality of spaced apart conductors towards the plane of said supporting medium *([**0055**], [**0056**], FIG. **1**, i.e. voltage pulses and capacitive dielectric would inherently produce an electric field)* and adapted to locally modify a ~~the~~ capacitive environment between a subset of said plurality of spaced apart conductors *([**0056**], FIG. **1**, i.e. capacitive dielectric)* without distortion of said conductive medium *([**0055**], [**0056**], FIG. **1**, i.e. the thickness of electrodes **6** does not change but insulating sheet **8**).*

However, **Yoshikawa et al.** do not teach that the conductive medium has a resistivity in the range of 100 ohms per square to 10,000,000 ohms per square.

In the same field of endeavor, **Tanaka et al.** teach that the conductive medium has a resistivity in the range of 100 ohms per square to 10,000,000 ohms per square *([**0320**])*.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.** teaching of touchpad structures with **Tanaka et al.** teaching of the conductive medium has a resistivity in the range of

100 ohms per square to 10,000,000 ohms per square *to improve accuracy of a pointing object detection and to reduce cost of design, engineering, parts, and manufacturing processes.*

Regarding Claim **4**, (Previously Presented) the touchpad as claimed in claim 1, wherein **Yoshikawa et al.** teach said electrically conductive medium is adapted to accentuate the variation in capacitance of a conductor and to control the dispersion of a resulting capacitive signal propagating from substantially the proximity of the finger *([**0056**], FIG. **1**)*.

Regarding Claim **5**, (Previously Presented) the touchpad as claimed in claim 1, wherein **Yoshikawa et al.** teach said supporting medium is electrically insulating *([**0056**], FIG. **1**)*.

Regarding Claim **6**, (Previously Presented) the touchpad as claimed in claim 1, wherein **Yoshikawa et al.** teach said conductive medium is in the form of a conductive layer covering at least a portion of said supporting medium *([**0056**], FIG. **1**)*.

Regarding Claim **7**, (Previously Presented) the touchpad as claimed in claim 6, wherein **Yoshikawa et al.** teach said conductive layer is discontinuous *([**0056**], FIG. **1**)*.

Regarding Claim **8**, (Previously Presented) the touchpad as claimed in claim 6, wherein **Yoshikawa et al.** teach said conductive layer is selectively supported by a first surface of said supporting medium or a first surface of a dielectric medium *([**0054**], [**0056**], FIG. **1**, i.e. panel **3**)*.

Regarding Claim **9**, (Previously Presented) the touchpad as claimed in claim 8, wherein **Yoshikawa et al.** teach said dielectric medium has a thickness which is relatively large as compared to the thickness of said conductive layer *([**0056**], FIG. **1**)*.

Regarding Claim **10**, (Currently Amended) the touchpad as claimed in claim 6, **Yoshikawa et al.** teach further comprising a non-conductive layer proximate to said conductive layer *([**0056**], FIG. **1**)*, wherein said non-conductive layer is configured to prevent direct user contact with the conductive layer *([**0056**], FIG. **1**)*.

Regarding Claim **11**, (Previously Presented) the touchpad as claimed in claim 8, wherein **Yoshikawa et al.** teach said supporting medium and said conductive layer are separated by said dielectric medium *([**0054**], [**0056**], FIG. **1**, i.e. panel **3**)*.

Regarding Claim **12**, (Previously Presented) the touchpad as claimed in claim 8, wherein **Yoshikawa et al.** teach said conductive layer is sandwiched between said supporting medium and said dielectric medium *([**0054**], [**0056**], FIG. **1**, i.e. panel **3**)*.

Regarding Claim **13**, (Previously Presented) the touchpad as claimed in claim 8, wherein **Yoshikawa et al.** teach said supporting medium is sandwiched between said conductive layer and said dielectric medium *([**0056**], FIG. **1**)*.

Regarding Claim **14**, (Previously Presented) the touchpad as claimed in claim 8, **Yoshikawa et al.** teach comprising a further conductive layer proximate to said dielectric medium and sandwiching said dielectric medium between said further conductive layer and said conductive layer *([**0056**], FIG. **1**)*.

Regarding Claim **20**, (Previously Presented) the touchpad as claimed in claim 14, wherein **Yoshikawa et al.** teach said further conductive layer is supported by

a second surface of said dielectric medium, said second surface being in substantially opposed relation to said first surface of said dielectric medium *([**0056**], Fig. **1**).*

Regarding Claim **28**, (Previously Presented) the touchpad as claimed in claim 1, wherein **Tanaka et al.** teach said supporting medium and said conductive medium are formed as a single conductive support and sensing layer *([**0318**]).*

Regarding Claim **29**, (Currently Amended) the touchpad as claimed in claim 28, wherein **Tanaka et al.** teach said single conductive support and sensing layer is formed from a bulk doped medium having a bulk conductivity *([**0318**]).*

Regarding Claim **30**, (Currently Amended) the touchpad as claimed in claim 29, wherein **Tanaka et al.** teach said bulk doped medium is glass or plastic comprising a dopant of conductive material *([**0340**]).*

Regarding Claim **31**, (Currently Amended) the touchpad as claimed in claim 30, wherein **Tanaka et al.** teach said conductive material is selectively particulate or fibrous *([**0321**])*.

Regarding Claim **32**, (Currently Amended) the touchpad as claimed in claim 31, wherein said particulates may be selectively formed from metal or metal oxides with a size up to 10 microns wide is an obvious *Choice of Design*.

Regarding Claim **33**, (Currently Amended) the touchpad as claimed in claim 31, wherein said the fibrous material may be selectively formed from nanotubes or carbon fibers with a length up to 10 millimeters is an obvious *Choice of Design*.

Regarding Claim **34**, (Currently Amended) the touchpad as claimed in claim 28, wherein **Tanaka et al.** teach said plurality of conductors are substantially contained within said single conductive support and sensing layer *([**0318**])*.

Regarding Claim **35**, (Previously Presented) the touchpad as claimed in claim 1, wherein **Yoshikawa et al.** teach said plurality of conductors are each electrically insulated *([**0054**], Fig. **1**, i.e. **8**).*

Regarding Claim **36**, (Previously Presented) the touchpad as claimed in claim 35, wherein **Tanaka et al.** teach each conductor of said plurality of conductors is coated with an electrically insulating sheath ([**0006**]).

Regarding Claim **37**, (Previously Presented) the touchpad as claimed in claim 28, wherein said conductive support and sensing layer has a textured surface in the form of surface distortions for the redirection of a point of touch which is an obvious *Choice of Design*.

Regarding Claim **39**, (Previously Presented) the touchpad as claimed in claim 1, wherein **Yoshikawa et al.** teach said touchpad is resilient *([**0054**], Fig. **1**).*

Regarding Claim **40**, (Previously Presented) the touchpad as claimed in claim 1, wherein **Yoshikawa et al.** teach said touchpad is deformable *([**0054**], Fig. **1**).*

Regarding Claim **41**, (Previously Presented) the touchpad as claimed in claim 1, wherein **Tanaka et al.** teach said conducting medium is selectively Indium Tin Oxide (ITO) or Antimony Tin Oxide (ATO) *(Col. **30**, [**0340**]).*

Regarding Claim **45**, (Previously Presented) the touchpad as claimed in claim 1, wherein **Yoshikawa et al.** teach said plurality of conductors comprises a first

series of spaced-apart conductors and a second series of spaced apart conductors disposed in intersecting relation *([0056], FIG. 1)*.

2. Claims **16**-**19**, **21**-**27**, and **38** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Yoshikawa et al. (US PGPub. 2003/0231170)** in view of **Tanaka et al. (US PGPub. 2004/0017364)** and further in view of **Vranish (US PGPub. 2002/0000977).**

Regarding Claim **16**, (Previously Presented) **Yoshikawa et al.** and **Tanaka et al.** teach the touchpad as claimed in Claim 1.

However, **Yoshikawa et al.** and **Tanaka et al.** do not teach the conductive medium electrically floats or is grounded to earth.

In the same field of endeavor, **Vranish** teaches said conductive medium electrically floats or is grounded to earth *([0031], Fig. 3)*.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.** and **Tanaka et al.** teaching of touchpad structures with **Vranish** teaching of the conductive medium electrically floats or is grounded to earth to reduce background noise and electromagnetic interference.

Regarding Claim **17**, (Previously Presented) **Vranish** teaches the touchpad as claimed in claim 16, wherein said conductive medium is selectively grounded by a wire or a resistor *([0031], Fig. 3)*.

Regarding Claim **18**, (Previously Presented) **Yoshikawa et al.** and **Tanaka et al.** teach the touchpad as claimed in claim 6.

However, **Yoshikawa et al.** and **Tanaka et al.** do not teach the conductive layer comprises a plurality of electrically isolated conductive regions selectively separated by regions of a first surface of said supporting medium or first surface of said dielectric medium.

In the same field of endeavor, **Vranish** teaches a plurality of electrically isolated conductive regions selectively separated by regions of a first surface of said supporting medium or first surface of said dielectric medium *([**0031**], Figs. **2** & **3**).*

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.** and **Tanaka et al.** teaching of touchpad structures with **Vranish** teaching the conductive layer comprises a plurality of electrically isolated conductive regions selectively separated by regions of a first surface of said supporting medium or first surface of said dielectric medium *to apply the technology not only to a touchpad but also to a keypad.*

Regarding Claim **19**, (Previously Presented) the touchpad as claimed in claim 18, wherein **Vranish** teaches the separations between said ~~the~~ conductive regions are relatively small compared to the width of said conductive regions, so as to selectively allow capacitive coupling of adjacent regions via said ~~the~~ supporting medium or said dielectric medium *([**0031**], Figs. **2** & **3**).*

Regarding Claim **21**, (Previously Presented) **Yoshikawa et al.** and **Tanaka et al.** teach the touchpad as claimed in claim 20.

However, **Yoshikawa et al.** and **Tanaka et al.** do not teach wherein said further conductive layer comprises a plurality of electrically isolated conductive regions separated by regions of said second surface of said dielectric medium.

In the same field of endeavor, **Vranish** teaches wherein said further conductive layer comprises a plurality of electrically isolated conductive regions separated by regions of said second surface of said dielectric medium *([**0031**], Figs. **2** & **3**).*

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.** and **Tanaka et al.** teaching of touchpad structures with **Vranish** teaching of said further conductive layer comprises a plurality of electrically isolated conductive regions separated by regions of said second surface of said dielectric medium *to correspondingly adapt to the keypad design*.

Regarding Claim **22**, (Previously Presented) the touchpad as claimed in claim 21, wherein **Vranish** teaches said conductive regions on said first surface of said dielectric medium and said conductive regions on said second surface of said dielectric medium are registered to each other by virtue of corresponding substantially coterminous areas *([**0031**], Figs. **2** & **3**).*

Regarding Claim **23**, (Previously Presented) the touchpad as claimed in claim 21, wherein said conductive regions on said first surface of said dielectric medium and said conductive regions on said second surface of said dielectric medium are registered to each other by virtue of corresponding overlapping non-coterminous areas which is an obvious *Choice of Design* disclosed by applicant's disclosure *([**0094**], [**0095**])*.

Regarding Claim **24**, (Previously Presented) the touchpad as claimed in claim 22, wherein **Vranish** teaches said registered regions are capacitively coupled via said dielectric medium *([**0045**], Table **1**).*

Regarding Claim **25**, (Previously Presented) the touchpad as claimed in claim 18, wherein **Vranish** teaches said conductive regions are substantially rectangular *(Fig. **2**).*

Regarding Claim **26**, (Previously Presented) **Yoshikawa et al.** and **Tanaka et al.** teach the touchpad as claimed in claim 8.

However, **Yoshikawa et al.** and **Tanaka et al.** do not teach said conductive layer comprises a plurality of electrically isolated conductive regions selectively separated by regions of said first surface of said supporting medium or said first surface of said dielectric medium, each conductive region of said plurality of conductive regions being linked by one or more conductive bridges to adjacent conductive regions, said conductive bridges having a width substantially smaller than the width of said conductive regions.

In the same field of endeavor, **Vranish** teaches said conductive layer comprises a plurality of electrically isolated conductive regions selectively separated by regions of said first surface of said supporting medium or said first surface of said dielectric medium, each conductive region of said plurality of conductive regions being linked by one or more conductive bridges to adjacent conductive regions, said conductive bridges having a width substantially smaller than the width of said conductive regions *([**0047**], Fig. **6**).*

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.** and **Tanaka et al.** teaching of touchpad structures with **Vranish** teaching of said conductive layer comprises a plurality of electrically isolated conductive regions selectively separated by regions of said first surface of said supporting medium or said first surface of said dielectric medium, each conductive region of said plurality of conductive regions being linked by one or more conductive bridges to adjacent conductive regions, said conductive bridges having a width substantially smaller than the width of said conductive regions *to adjust the resistivity to a desired specification.*

Regarding Claim **27**, (Previously Presented) the touchpad as claimed in claim 26, wherein **Vranish** teaches said conductive regions have a relatively large thickness and said conductive bridges have a relatively small thickness to increase the resistance in said conductive layer *([**0047**], Fig. **6**).*

Regarding Claim **38**, (Previously Presented) **Yoshikawa et al.** and **Tanaka et al.** teach the touchpad as claimed in claim 1.

However, **Yoshikawa et al.** and **Tanaka et al.** do not teach said touchpad is arranged into a non-planar configuration.

In the same field of endeavor, **Vranish** teaches said touchpad is arranged into a non-planar configuration (Fig. **4**).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.** and **Tanaka et al.** teaching of touchpad structures with **Vranish** teaching of said touchpad is arranged into a non-

planar configuration *to apply the technology not only to a touchpad but also to other input devices.*

3. Claims **42** and **44** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Yoshikawa et al. (US PGPub. 2003/0231170)** in view of **Tanaka et al. (US PGPub. 2004/0017364)** and further in view of **Lin et al. (US Patent No. 6954868).**

Regarding Claim **42**, (Previously Presented) **Yoshikawa et al.** and **Tanaka et al.** teach a touchpad system including a touchpad as claimed in claim 1.

However, **Yoshikawa et al.** and **Tanaka et al.** do not teach a sensing circuit comprising a touch detector circuit and a wake up circuit, said sensing circuit periodically sleeping and waking to measure the state of said touchpad, wherein in response to a touch, said sensing circuit wakes up, if sleeping, and scans the surface to determine the touch position.

In the same field of endeavor, **Lin et al.** teach a sensing circuit comprising a touch detector circuit and a wake up circuit, said sensing circuit periodically sleeping and waking to measure the state of said touchpad, wherein in response to a touch, said sensing circuit wakes up, if sleeping, and scans the surface to determine the touch position *(Col. **8**, Ln. **1**-**28**, Fig. **4**).*

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.** and **Tanaka et al.** teaching of touchpad structures with **Lin et al.** teaching of a sensing circuit comprising a touch

detector circuit and a wake up circuit, said sensing circuit periodically sleeping and waking to measure the state of said touchpad, wherein in response to a touch, said sensing circuit wakes up, if sleeping, and scans the surface to determine the touch position *to reduce the power consumption utilizing sleep and wake up states.*

Regarding Claim **44**, (Previously Presented) the touchpad system as claimed in claim 42, wherein the power consumption of said sensing circuit is less than about 10 microamps when sleeping is an obvious Choice of Design.

4. Claim **43** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Yoshikawa et al. (US PGPub. 2003/0231170)** in view of **Tanaka et al. (US PGPub. 2004/0017364)** in view of **Lin et al. (US Patent No. 6954868)** and further in view of **Files et al. (US Patent No. 5657053).**

Regarding Claim **43**, (Original) **Yoshikawa et al.**, **Tanaka et al.**, and **Lin et al.** teach the touchpad system as claimed in claim 42.

However, **Yoshikawa et al.**, **Tanaka et al.**, and **Lin et al.** do not teach the touch is detected in less than about 3 microseconds.

In the same field of endeavor, **Files et al.** teach the touch is detected in less than about 3 microseconds.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.**, **Tanaka et al.**, and **Lin et al.** teaching of touchpad structures, detection circuit for sleeping and awaking modes with

Files et al. teaching of the touch is detected in less than about 3 microseconds *in order to benefit of quickly responding and deactivating when touch being detected*.

Response to Arguments/Amendments/Remarks

5. Claims **2**, **3**, and **15** are cancelled.

6. Applicant's arguments filed 10/28/2010 have been fully considered but they are not persuasive.

First of all, applicant argues that **Tanaka et al.**'s conductive medium is designed for use in a *"resistance film touch panel"* and, therefore, it cannot combine with **Yoshikawa et al.**. However, the Examiner respectfully disagrees because all of the capacitive touch panel's limitations are taught by **Yoshikawa et al.**. The only limitation, namely, *"the conductive medium has a resistivity in the range of 100 ohms per square to 10,000,000 ohms per square",* is undisputedly taught by **Tanaka et al.** *([**0320**])* and would have been undoubtedly produced, regardless of its intended use in resistive or capacitive touch panels. Furthermore, **Tanaka et al.** also teach that the conducting medium is selectively Indium Tin Oxide (ITO) or Antimony Tin Oxide (ATO) *(Col. **30**, [**0340**])* which would have been produced and used on capacitive, resistive touch panels, and LCD. This is obviously suggested to a person having ordinary skill in the art at the time the invention was made to interchange or replace commonly well-known parts.

Secondly, applicant argues that there is no motivation to combine the references. However, the Examiner respectfully disagrees because the motivation is clearly stated above as "*to improve accuracy of a pointing object detection and to reduce cost of design, engineering, parts, and manufacturing processes".* Furthermore, a person having ordinary skill in the art at the time the invention was made to utilize the vast ranges of the conductive medium which has a resistivity in the range of 100 ohms per square to 10,000,000 ohms per square to accommodate and eliminate redundancy in design (testing, certifying new products, and re-designing different parts for different models), engineering (including new product testing and quality assurance), parts (including different tooling and product quality control), and manufacturing processes (including unfamiliarity, new training, and quality assurance) which ultimately reduce cost and time.

Thirdly, applicant argues that **Yoshikawa et al.** do not teach electrodes *"to concentrate an electric field between said plurality of spaced apart conductors towards the plane of a supporting medium".* However, the Examiner respectfully disagrees because while it is true that **Yoshikawa et al.** teach the column electrodes (6) extend in the Y-direction and the row electrodes (7) extend in the X-direction, an electric field must exist between the column and row electrodes. As the pointing means approaches an intersection of the electrodes, electric field is concentrated in a direction towards a plane of a supporting medium; hence the touch location is determined.

Finally, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the

rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Concerning JP' 550's teaching and Claim 10, the Examiner neither uses JP' 550 as a reference nor confirms its disclosure and enablement. Furthermore, it is noted that the features upon which applicant argues, i.e. moisture and water concentration, are not recited in the rejected claim(s). The arguments, therefore, are moot.

Conclusion

The prior art(s) made of record and not relied upon (is)/are considered pertinent to applicant's disclosure: Shimizu; Toshiyuki (US Patent/PGPub. No. 6628269).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VINH T. LAM whose telephone number is (571)270-3704. The examiner can normally be reached on M-F (7:00-4:30) EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on (571) 272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Vinh T Lam/
Examiner, Art Unit 2629

/Amare Mengistu/
Supervisory Patent Examiner, Art Unit 2629